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THE COST OF STATUS: WHEN SOCIAL AND ECONOMIC INTERESTS COLLIDE

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**THE COST OF STATUS:
WHEN SOCIAL AND ECONOMIC INTERESTS COLLIDE**

ABSTRACT

While researchers have devoted considerable attention to assessing how organizations benefit from ascriptions of high status, relatively little research has analyzed the financial costs that organizations may incur in actively managing such ascriptions. In this study, we analyze how and why organizations may pay a relatively steep economic price for the attainment and/or maintenance of social status. Specifically, we advance an original theoretical perspective that suggests that firms engaged in economic competition are simultaneously engaged in social ceremony and that these dual processes can generate a combination of social gains (in terms of status) and economic losses (in terms of profitability). We theorize and test our perspective in the context of competitive bidding ceremonies using a unique, decade-long dataset on repeated competitive market interactions among firms in the U.S. construction industry. We find support for our prediction that firms' participation in bidding ceremonies can generate divergent outcomes, i.e., higher social status *and* diminished economic performance. We discuss the implications of our theoretical and empirical analysis for the existing literature on social status, competitive bidding, and more generally, on the role social forces play in competitive market behaviors and outcomes.

KEYWORDS: Ceremony, Status, Stratification, Strategy, Markets, Economic Sociology, Networks

THE COST OF STATUS: WHEN SOCIAL AND ECONOMIC INTERESTS COLLIDE

Recent years have witnessed a growing number of studies in the organizational theory and strategy literatures that have demonstrated the many benefits that accrue to organizations with high status (Benjamin and Podolny 1999, Washington and Zajac 2005). These findings, found across a wide variety of contexts, include evidence showing that status is a significant predictor of strategic decisions related to cooperative, long-term, inter-firm relationships, such as alliance partnerships (Lin et al. 2009, Stuart et al. 1999), affiliations between investment banks (Chung et al. 2000, Podolny 1994), and underwriters sought by commercial banks entering investment banking (Jensen 2003). Extant research further suggests that status is positively related to gaining access to resources, such as financial capital (Dimov et al. 2007), customers in newly-entered markets (Jensen 2003), and invitations to lucrative post-season tournaments (Washington and Zajac 2005).

Perhaps because these studies are impressive in their breadth and depth of support for the intuitive notion that the pursuit of status can reap significant rewards, considerations of the cost of pursuing status have been rare. Indeed, most organizational research on status has been aimed at answering the question of “How much does status help firms?” rather than “What are the costs and benefits of pursuing status?” While some research has addressed the question of “status anxiety” (Jensen 2006, Podolny 2001, de Botton 2005), this notion has typically been used to describe the fear that high-status actors (whether individual or organizational) have of being devaluated because of low-status affiliations. Indeed, the anxiety of losing status arises precisely because actors perceive a social (and often economic) benefit from high status.

In this study, we seek to problematize the notion that high status will result in substantial social *and* economic benefits. More specifically, we suggest organizations may incur significant financial costs in attaining and maintaining status within competitive market contexts. To contextualize our arguments in a manner that allows us to assess economic gains and losses, we use the setting of highly-competitive

bidding markets. Economists have frequently used this context in experimental studies, creating what could be considered an under-socialized environment (Granovetter 1985, Zajac and Bazerman 1991) that allows for the identification of economically optimal (or suboptimal) firm behavior (Lind and Plott 1991, Thiel 1988). Scholars have generally demonstrated that competing actors are influenced by their perceptions and expectations of competitors (Siclen 2010), which is partially responsible for some puzzling non-optimal firm behavior across a wide variety of competitive contexts. These include strategic errors in domains such as mergers/acquisitions (e.g., Giliberto and Varaiya 1989, Kim et al. 2011), capacity expansion decisions (e.g., Zajac and Bazerman 1991), outsourcing (e.g., Kern et al. 2002), corporate takeovers (e.g., Boone and Mullherin 2008, Roll 1986) and capital market activities (Beatty and Ritter 1986, Rock 1986).

While psychological explanations have occasionally been proffered to explain such non-optimal firm behavior, we offer instead a sociological theoretical perspective that begins with the view that firms engaged in economic competition are simultaneously engaged in social ceremony. Moreover, we suggest that these dual economic and social processes can generate a mixed combination of outcomes, whereby firms may experience both social gains (in terms of status) and economic losses (in terms of financial profitability). Therefore, we see firms as pursuing their interests, but we agree with Swedberg (2005) that interests are invoked in both economic (i.e., material/financial) and sociological (i.e., social status) terms. Indeed, Weber ([1922] 1978) uses the term “status interests” (*standaeische Interessen*) to capture the latter.

To emphasize the sociological notion of status interests, we begin our theorization with a reinterpretation of competitive bidding situations as ritualized market ceremonies that, over time, drive social stratification—the categorization of organizations based on socioeconomic factors—among competing firms. We argue that this social structure fosters a market context where social judgments are created, shared, and institutionalized by members of a referent social audience. We then argue that this

combination of social structure and interpretation creates status-based concerns among actors such that the pursuit of firm status (i.e., the attainment and maintenance of social status) in the competitive context can conflict with economic interests. We build on prior research in sociology focused on social stratification and status anxiety to argue why efforts to attain and maintain status can lead to strategic decisions that may be considered suboptimal in terms of economic performance. In other words, we suggest that the costliness of the attainment and maintenance of social status can be understood not as an aberration, but rather as the predictable outcome of a status-based, ceremonial contest between organizations.

Our sociological perspective provides the basis for reinterpreting and reconciling some of the more puzzling suboptimal bidding decisions found in prior research that has relied on under-socialized conceptualizations of firms' market behavior. The social context of competitive bidding, we suggest, can fuel the pursuit and maintenance of social interests at the expense of economic interests. Given that competitive bidding is fundamentally a social context, we also hypothesize that firm's may engage in symbolic (e.g., expressive or social displays to signal legitimacy), as well as substantive (e.g., technical or economic actions) participation in the competitive bidding process in pursuing their status interests (Meyer and Rowan 1977, Selznick 1949, 1957, Westphal and Zajac 1994). We associate both types of behavior with the firm's efforts to attain and maintain status among its constituencies, and we focus on the financial outcomes of this specific competitive strategy.

We contextualize our hypotheses using a competitive bidding setting that we see as particularly well suited to testing our idea; namely, our analyses utilize a unique longitudinal data on firms competing for state-funded highway construction jobs in the U.S. between 1995 and 2005. Construction bid lettings constitute highly competitive markets where ritualized social activity is particularly visible through the recurrent interactions among competing actors; this allows us to capture important antecedents and outcomes of the formation of status hierarchies across time. As discussed in subsequent sections, our

supportive findings suggest that status mediates the relationship between participation in field-configuring ceremonies and firm performance. Generally, we show that both substantive and symbolic competitor participation in market ceremonies drives status gains, but that this upward movement in status is also negatively associated with subsequent financial performance. We also consider possible curvilinear and interaction effects of participation in business ceremonies on status in our findings. These findings indicate that symbolic participation has a curvilinear (inverted-U) relationship with status, suggesting diminishing returns to status attainment. However, our results examining the joint (i.e., interaction) effects further suggest engaging in symbolic participation generally amplifies the effectiveness of a firm's substantive participation on its status.

By analyzing how and why the pursuit of social interests in a competitive bidding ceremony can engender both social status gains and financial economic losses, we hope to provide an original contribution to existing research on the role of social factors in influencing strategic decisions in competitive market settings. Thus, our research builds upon and extends recent interest in developing more socialized conceptions of competitive market contexts (Granovetter 1985) that offer theoretical insight into the strategic actions of firms (e.g., Chung et al. 2000, Dimov et al. 2007, Zajac and Westphal 2004). By incorporating central sociological concepts, such as ceremony (e.g. Lampel and Meyer 2008, Trice and Beyer 1984), status (e.g., Goffman 1951, 1959, Podolny 1993), and social stratification (Gould 2002), into our theorization and analysis, we hope to provide important new insights regarding the role that social factors play in determining competitive behavior among firms.

THEORY AND HYPOTHESES

One of the earliest discussions of the sociological bases of markets include Weber's ([1922] 1978, p. 635) observation that "assemblage in one place" was a critical antecedent to the formation and structuring of markets. As both sociology of markets and institutional perspectives argue, repeated interactions among key stakeholders (e.g., suppliers, resource providers, product consumers, regulatory

agencies, and competitors) and the development of mutual awareness among actors create an underlying social structure in markets (DiMaggio and Powell 1983, White 1981a, 1981b). As such, markets are socially-structured environments in which recurrent and patterned social interactions institutionalize socially-legitimated shared meanings among constituent actors (Goffman 1959, 1963, Meyer et al. 2005, Powell and DiMaggio 1991, Meyer and Rowan 1977, Scott 1995, Swedberg 1994). Thus, markets are not simply price-setting mechanisms, but also social structures in which firms interact through “joint social construction” (White 1981b, p. 517).

Taking such a social constructionist perspective on markets draws theoretical attention to the cultural underpinnings of stratification in terms of ritual and ceremony in field-configuring events. Participation in field-configuring events, such as ceremonies, trade shows/fairs, and professional meetings, direct field-wide (i.e., market) activity by capturing and shaping emergent social processes, including information exchange, collective sensemaking, and social judgments (Bitektine 2011, Meyer et al. 2005). These formal, ritualized market-based events affect how actors attend to, interpret, act upon, and make sense of social reality (e.g., Berger and Luckmann 1966, Clemens and Cook 1999, Peterson and Lewin 1998), and can reinforce the field’s permanence and participants’ identification as field members (Dacin et al. 2010, Durkheim [1915] 1968, Lampel and Meyer 2008, Meyer et al. 2005). Furthermore, participation in such rituals results in “social stratification through the repeated enactment of roles and boundaries” (Dacin et al. 2010, p. 1394).

Drawing from these streams in organization theory and sociology, we are particularly interested in ceremonies, defined precisely as ritualized events that are (1) pre-planned, (2) occur in a designated place and time for the benefit of an audience, (3) are accepted and desired by a participant group, and (4) have both technical and expressive social consequences (Trice and Beyer 1984). Participation in ceremonies provides important insight into “the dynamic manner in which ritual operates in the social construction of reality” and opens up “a line of strategic action to interested social actors” (Anand and

Watson 2004, p. 62). Indeed, participation in ceremonies can be considered strategic because motivated social actors use elements of the ritual process to identify strategic actions (Bell 1992), as well as create sensible logics and status categories of actors (Rao 1994, 1998).

Participation in ceremonial events makes key actions of a focal actor visible to organizational field members whose social judgments provide institutional signals of legitimacy (DiMaggio and Powell, 1983, Fombrun and Shanley 1990) and worth (Goffman 1959). As White (1981b, p. 518) notes, “the key [legitimizing factor] is that producers watch each other within a market.” One of the primary roles of market ceremonies, then, is to make organizations visible to other actors participating in the same market (De Gregori 1977, Trice and Beyer 1984). Podolny (1993) also suggests that status is constructed by the perceptions of actors in an organizational field; these perceptions are impossible to construct without the visibility of their object. Price is one especially visible dimension of performance in which actors negotiate their status judgments with organizational field audiences (Berger et al. 1998, Bitektine 2011, p. 163). Consequently, the visibility of prices in competitive bid lettings, where prices are the primary signal to market actors, is a particularly salient market activity that affects the creation, sharing, and institutionalization of status judgments by members of a referent audience (Burris 2004).

An important implication of this line of discussion is the recognition that participation in ceremonial events should confer upon a social actor the socially-desirable outcome of status, even as it also sets into motion economically-undesirable financial outcomes (Meyer and Rowan 1977, p. 340-341). In our study, we see actors’ concerns regarding building or maintaining status through ceremonial participation as driving what could become disadvantageous economic outcomes (e.g., organization’s financial performance). Fundamentally, we suggest that the social context of competitive bidding situations can essentially transform actors’ perspectives of competitive bidding situations from *homo economicus*, which uses only economic criteria to weigh the “common value” of an auction (the term used by economists), to the *homo interpretans* perspective, which also utilizes social criteria. Below, we

first discuss the connection between competitive actors' participation in ceremonies and subsequent status judgments. Then, we link our prior arguments to our specific context used in this study with testable hypotheses.

Substantive and Symbolic Ceremonial Participation

Market events are considered ceremonial when they have cultural meaning or significance to participants beyond their explicitly task-related intent (Dacin, et al. 2010, Dandridge 1986). Thus, ceremonies, having both technical and expressive social consequences (Trice, Belasco, Alutto, 1969, Trice and Beyer 1984), influence the social construction of perceived status for firms in a competitive market, which stems from both *substantive* and *symbolic* forms of participation (DiMaggio and Powell 1983). As Meyer and Rowan (1977) note, substantive displays of success in ceremonies provide externally visible symbols of conformity to institutional norms and rules, while symbolic participation can advance actors' legitimacy as a continued market participant. Together, substantive and symbolic participation makes the organization more attractive to others as a potential partner and may facilitate access to necessary resources and survival (Peterson and Lewin 1998, White 1981b).

In ceremonial environments, such as marketplaces, firms are driven to seek more advanced status positions through visible manipulations of their own positively valued "criteria of worth" as perceived by others (Goffman 1951, 1959, Trice and Beyer 1984). Meyer and Rowan (1977, p. 348-349) initially delineated this process as one of embracing and publicizing "external assessment criteria," whereby firms' external worth is proactively managed through market ceremonies, such as: winning awards, publishing professional endorsements, and announcing major transactions (i.e., having high purchase/sales prices or social impacts). Such recognition during ceremonial events signals to competitors that the recipient firm warrants attention as a noteworthy adversary (or collaborative partner in many cases) and should be considered when making strategic decisions.¹ Accordingly, we argue that status perceptions held of market participants will be commensurate with objective measures of success as

publicized during ceremonies. That is, organizations that benefit from large, visible honors or awards presented during ceremonies—discussed hereafter as *substantive ceremony* participation—will be perceived of as having higher status.

In their intra-firm assessment of ceremonial rites of enhancement, Trice and Beyer (1984) suggest that actors' status positions advance to the extent that they are increasingly the objects of widely spread "good news," and we analogously propose that at the inter-firm level of analysis, actors' status will be similarly advanced by positive publicity. Thus, in our first hypothesis, we argue that successfully winning competitive market bids within the context of ceremonial events is interpreted as a positive *substantive* signal that results in subsequently higher levels of status for an organization. Formally, we state:

Hypothesis 1 (H1): *The greater a firm's prior substantive ceremony participation, the higher its status.*

In addition to substantive ceremonial actions taken within the social structure of market, organizations may also influence status through symbolic ceremonial actions (Trice, Belasco, Alutto, 1969, Trice and Beyer 1984, Lampel and Meyer 2008). For example, Zajac and Westphal (2004) found that, in addition to substantive adoption, symbolic announcements of stock repurchase plans—where the firm did not implement the plan—were also associated with a positive market response. We suggest similarly that the act of participating in the competitive bidding ceremonies can have positive symbolic value with respect to firm status based on social stratifications that result in status hierarchies.

Status hierarchies are constructed based on socially salient, consensually shared attributes of social actors that are accepted as social facts by external audiences (Berger and Luckmann 1967). Ritualized activities embedded within ceremonies serve to institutionalize cultural norms (Lampel and Meyer 2008), maintain social orders (Dacin et al. 2010, Lok and de Rond 2013, Giorgi and Weber 2015) and construct status symbols (Goffman 1951). As a result, status hierarchies are created as locally produced interaction orders rooted in institutionalized cultural norms, orders, and symbols (Goffman

1959). In particular, ceremonies “structure, validate, and stabilize collective action” by making actors, roles, and activities visible within a particular social context, thereby enabling actors to preserve their self- and extra-perceptions of community (Trice et al. 1969, p. 42). Participation in ritualized ceremonial activities, therefore, provides an important mechanism for actors to influence the social valuations of external audiences, as well as reaffirm the self in relation to others (Goffman 1959, Dacin et al. 2010).

We discuss this hereafter as *symbolic ceremony participation*, where organizations gain a status benefit based on symbolic actions that signal they are important marketplace participants to the collective set of market actors. This leads to our second hypothesis regarding how actors participating in competitive bidding ceremonies—even if only symbolically—will also enjoy a subsequent status benefit.² Formally, we state:

Hypothesis 2 (H2): *The greater a firm’s prior symbolic ceremony participation, the higher its status.*

The Cost of Attaining and Maintaining Status

Our argument to this point has emphasized how firms in competitive market situations are likely to pursue social interests, as well as economic interests (Swedberg, 2005). In this section, we analyze the possibility that such socially driven pursuits may also be economically costly rather than economically beneficial; this is opposed to what is typically posited in studies of status and organizational performance. We begin by noting Washington and Zajac’s (2005) important distinction between organizational reputation, which is earned through prior superior performance, and status, which is ascribed through social ordering. Such a view highlights how status encapsulates privilege bestowed upon actors because of their relative *social positions* as perceived by others (Gould 2002), while reputation involves prestige based upon external beliefs regarding prior *economic outcomes* such as quality or firm performance (Dutton et al. 1994).

Status categories are then arranged into status hierarchies or orderings, based on the social judgments of organizational field members (Gould 2002) that represent the “socially constructed, inter-

subjectively agreed-upon and accepted orderings” (Washington and Zajac 2005, p. 284). Thus, status hierarchies are enacted as local realities for actors in which a consensus is reached regarding the social worth or value of an actor (or category of actor) based on some distinguishing attribute (Ridgeway 1991, Ridgeway et al. 1998). The strongest candidates for a distinguishing attribute are the socially desired, commonly observed to show differences among actors (Bitektine 2011, Fiske and Taylor 1991). Further, status orderings are generally stable, which is in line with Goffman (1951, p. 294) who argues that “the rights and obligations of a status are fixed through time by means of external sanctions enforced by law, public opinion, and threat of socio-economic loss, and by internalized sanctions of the kind that are built into a conception of self.”

Recent research suggests that economic actors are sensitive to attaining or maintaining status. For example, prior research suggests status is a significant factor in partnering decisions in strategic alliances (e.g., Jensen 2003, Lin et al. 2009, Stuart et al. 1999), investment bank affiliations (Chung et al. 2000, Podolny 1994), and selection of underwriters by commercial banks (Jensen 2003). This stream of research suggests that firms seek to improve or maintain their status by choosing strategic partners who have similar or higher levels of status. Relatedly, Jensen (2006) suggests that status anxiety is triggered when firms: (1) are accountable to specific audiences (e.g., market institutions, governments, employees, customers, or suppliers), (2) compare themselves with other actors in similar institutional environments, and/or (3) have strong commitments to a particular identity.

We see our context of the competitive bidding markets as providing fertile ground for such status anxiety. Specifically, participation in such business ceremonies creates a context where competitive bid prices are an especially visible as actors negotiate status judgments with field-wide audiences (Bitektine 2011, p. 163). Gaining and maintaining high status also provides social benefits of reaffirming the “self” in the firm’s relations with others within cultural processes involving external audiences (Goffman 1959, Dacin et al. 2010). The question that remains, however, is whether a firm’s pursuit of social interests in

this context will have a positive or negative effect on the pursuit of shorter-term economic goals. Below, we discuss why we believe that firms in competitive bidding situations may be highly attuned to social status considerations (i.e., status interests) and, therefore, more likely to make suboptimal strategic decisions (i.e., generate negative financial performance outcomes) in competitive bidding markets.

We begin by noting an important insight in prior research on the potentially suboptimal economic behavior of high-status actors; namely, Jensen's (2008, p. 723) observation that firms with longstanding, high-levels of status often employ a form of "relational discrimination" against firms that are just newly promoted to high-status positions. High status firms prefer to maintain exchange relationships with other high-status firms, which can deter the focal firm from building relationships that could provide higher economic benefits. Similarly, Beckman and colleagues (2004) find that when firms collectively experience high uncertainty in a market, they tend to rely on established ties rather than developing new ones. For example, if a focal firm depends on high-status partners and sub-contractors within its established network of business ties, it may strive to maintain these existing ties and its present status out of fear of losing these loyal partners in the future—despite the potential economic gains from new partnerships with lower-status firms (Moore et al. 2017). Status anxiety is also associated with the dissolution of partnering relationships. For example, when the status of a partner is comprised, high-status firms experience status anxiety and subsequently dissolve these relationships despite the economic costs of switching partners (Jensen 2006). As such, both efforts to maintain a high-status position and fears of losing status (i.e., status anxiety) may result in suboptimal strategic decisions (as defined from an economic interests perspective), when making partnering decisions.

Status anxiety is especially pronounced in market structures characterized by "stronger audiences," whose negative perceptions—based on the visible actions of the focal firm—can cause a loss of status (Jensen 2006, p. 97). This is in line with research on the cultural underpinnings of stratification, which is concerned with the cultural processes involving external audiences that observe and evaluate

competitors (Dacin and Dacin 2008, Weber and Dacin 2011). This research stream strongly points out that market institutions produce strong audiences when firms lack anonymity and are accountable to other stakeholders, such as governments, regulatory bodies, partners, suppliers, and customers. Hence, while a firm in such a situation may be pursuing a sought-after social goal (status) through a ceremonial event, it may also achieve a suboptimal economic outcome because of its bidding behaviors. In sum, many factors converge to create acute status anxiety in competitive bidding contexts because firms' bidding behaviors are highly visible across repeated interactions among actors. Therefore, we hypothesize that concern about maintaining or losing firm status (i.e., status anxiety) manifests in negative returns. Formally, we state:

Hypothesis 3 (H3): *The higher the organizational status conferred through participation in ceremonies, the lower the firm's financial performance.*

RESEARCH METHODOLOGY

Context of Study

The database for the current study was sourced through a series of information requisitions from a large U.S. state's Department of Transportation (DOT). Our data (sample descriptives are provided in the next subsection) includes all contracts for transportation infrastructure construction within the state between 1995 and 2005 and allows for the construction of networks between competing contractors and the respective contractors' partners (i.e., sub-contractors). We chose the highway construction industry from this state as our research context because it met four important criteria for our study. First, highway construction is a very competitive and job contracts are auctioned to the lowest bidder. As noted by Eccles (1981), the construction industry contains many competitors, has relatively low barriers to entry, and involves largely standardized products and technologies. Further, the auction process is repeatedly played out over long periods of time between easily identifiable players.

A second key criterion is that highway construction bid lettings are widely seen as being organizationally relevant events where ritualized market actions are especially visible. As such, they function as ceremonies based on Trice and Beyer's (1984) definition. Key ceremonial activities include using conventional types of documentation, following established procedures and rules, and shared patterns of events. Moreover, during the time represented by our data (1995-2005), the live bidding activity occurred monthly in front of an audience of state officials, partners, suppliers, subcontractors, bonding companies, and competing construction firms. Thus, the context offers both substantive and symbolic firm actions. For example, contract bid lettings in the state are the primary venue where winning bids are announced. Based on interviews with several industry participants, we found that virtually all active construction firms in the state maintain a consistent presence at the bid lettings. In addition to the presentation of winning bids, state bid letting ceremonies create an environment where symbolic actions by firms are visible. When the state presents a winning bid for a specific construction project, they also present the losing bids made by competing firms. As one contractor interviewed during the early phases of our research investigations stated,

"...[i]t's important for us to make a good showing to the state at the lettings and face our competitors. The state and our competitors need to know we mean business ...even if we lose a bid, they see we're still in the game."

As another contractor stated,

"Every bid is important. Whether we win or lose, everybody is watching. Not just the contractors we are competing against right now, but everybody we have competed against in the past or might [face] in the future. Even our subs [subcontractors] and bonding company are watching what we do and taking mental notes."

Overall, managers of competing firms generally feel the need to appear at contract lettings and participate in the ceremonies for symbolic reasons beyond the substantive or functional role of winning bids. In fact, bid lettings are essentially ceremonial because they are conducted despite available technology owned by the state that has the capability for taking bids and notifying participating firms electronically of bids and results. Instead, the state purposefully chose to maintain the ceremonial aspects of participation in

contract lettings. Consequently, our second reason for choosing state highway construction is that bid lettings make ritualized, ceremonial activities especially visible.

Our third reason for choosing the highway construction industry context was the ability to utilize network methods to measure status based on the network of cooperative ties that contractors had with their respective subcontractors. Our approach is based, in part, on Oliver and Montgomery's (2008) use of network methods to model the social structure among participants to examine sensemaking in a field-configuring event (e.g., ceremonies). As such, we could utilize network methods to build a panel dataset that includes complete information on competitive bids between competing firms, construction project outcomes, and the relationships between contractors and their respective subcontractors.

Our fourth and final reason for choosing the highway construction industry was based on the ability to control for the effects of reputation or quality. Although the terms reputation and status are frequently juxtaposed in the literature, research has sought to distinguish the two constructs from one another (Washington and Zajac 2005), where status "like reputation, can function as a market signal firms can use to make inferences about future unobservable quality, but status is based on past ties, whereas reputation is based on past performance" (Jensen 2003, p. 470). Therefore, since our data include firm-level information and financial contract values and outcomes, we could control for reputational effects to isolate the antecedents and consequences of status positions. Additionally, the job bidding mechanism essentially holds quality constant because the state agency, who manages all state-contracted highway construction projects, monitors the quality of work completed by contractors to maintain a uniform (i.e., minimum) level of quality across all projects. Across the 11 years of our sample, there were no rewards of any kind for firms who exceed the quality standards set forth by the state agency. Moreover, bids submitted by contracting firms are independent from the outcomes of previously completed construction projects, such that there is no sort of preferential treatment or reward of firms who provide higher quality

job outcomes. The single determining factor for being awarded a construction project is simply the firm with the lowest bid.

Although our context offers us a good opportunity to test the impact of social factors on economic decisions given the highly competitive nature of this industry, our data is limited to government-funded projects. Thus, we have no ability to factor in projects that are funded privately. However, based on our interviews with several executives from firms in our sample and state officials (as well as our own knowledge of the industry), the number of privately-funded projects taken on by these firms is rather small. These sources indicated that privately-funded projects make up only about 5% to 10% of any firm's annual sales. In addition, privately-funded projects are generally announced publicly and awarded based on lowest bid as well, making the process not significantly different from the process organized by the state.

Sampling and Variable Specifications

Our sample includes 308 primary contracting firms that had been awarded at least one contract in any year between 1995 and 2005; this resulted in a sample size of 3,167 firm-years. In addition to the 318 primary contracting firms, another 949 subcontracting firms were included in our status measure, which is further described below. The average age of the 308 contracting firms was 17 years with an average of \$88.2 million in annual revenues. The average size of construction projects awarded was \$2.2 million. On average, contracting firms bid on 40.93 contracts per year and won 22.61 contracts per year.

Measures

Ceremony Participation Variables. We created two measures of ceremony participation. First, we measured *substantive ceremony participation* as the number of bids won by each firm in a given year. Second, we measured *symbolic ceremony participation* based on a firm's rank on auction bids, in which a rank of one is the lowest (i.e., winning) bid, rank of two is the second lowest bid, and so on. Therefore, as rank increases, a bid becomes more symbolic (Zajac and Westfall 2004). For this measure, we computed

each firm's average rank on all bids submitted within a calendar year. Since all firms submitting contracts were required to be present at ceremonies where contracts are awarded, increased contract submissions result in increased participation and visibility at the business ceremonies.

Status. Status has historically been measured based on its association with perceived differences of output quality among firms (e.g., Fombrun 1996). However, such a measure is more consistent with the conceptualizations of reputation than status (Jensen and Roy 2008, Washington and Zajac 2005). A more contemporary view of status is the prestige accorded actors due to hierarchical positions occupied within a social structure; such a view reflects the linkage between status perceptions held by others and position achieved within the overall industry network (Gould 2002, p. 1147; Jensen 2003, p. 470). Marketplace status, as originally noted by Bonacich (1987), represents the perceived differential *positions* (versus roles or quality) that actors hold in the overall structure of exchange relations within a market.

Although a direct measure of a firm's status could be taken by consulting its industry peers about their status perceptions for all competing firms, accomplishing this in the current context would require a survey- or interview-based methodology. Such approaches, however, are problematic because social network measures are notoriously sensitive to the complications created by missing data and incomplete networks, which would be particularly prevalent over multiple years (e.g., Kossinets 2006). Therefore, it was more reasonable to utilize an established network-based measure of firm status based on the relations between contractors and their partnering subcontractors in the database. As operationalized herein, status refers to the relative prominence of the social structural position a firm occupies in an inter-organizational network, based on the firm's overall centrality in comparison to other actor's centrality in the same social structure (e.g., Gould 2002, Lin 1999).

Numerous measures of network centrality have been employed in previous research as reflective of a firm or actor's social position. However, eigenvector centrality has been shown to be especially useful as a measure of status and is used herein (Bonacich and Lloyd 2001, p. 191; Jensen 2003, p. 481).

Borgatti (2005) observes that eigenvector centrality is particularly well suited for measuring influence issues within a network context given its close mathematic relationship to the measures of Katz (1953), Hubbell (1965), Taylor (1969), Coleman (1990), and Friedkin (1991). Given its basis in influence measures, eigenvector centrality does not assume indivisibility in the network flow, nor does it simply represent an actor's number of direct ties (i.e., degree centrality) (Borgatti 2005, Wasserman and Faust 1994). Rather, eigenvector centrality is a function of the centralities of those to whom an actor is connected, thereby incorporating both direct and indirect ties within a social network (Bonacich 1987, Wasserman and Faust 1994).

Specifically, eigenvector centrality is computed as:

$$c_i(\alpha, \beta) = \sum_j (\alpha + \beta c_j) \mathbf{R}_{ij}$$

where \mathbf{R}_{ij} is an element of a relational Matrix \mathbf{R} , representing the number of contracts shared by firms i and j during one year. The parameter α is an arbitrary scaling factor for the measure, while β represents the extent to which the centrality of firm _{i} is a function of the centralities of other firms that firm _{i} is connected. Borgatti et al. (2002) recommend setting β at less than the reciprocal of the largest eigenvalue of \mathbf{R} . Consequently, we set β equal to three-quarters of the largest eigenvalue (Podolny 1993), which results in a positive number. “If β is positive, $c(a, \beta)$ is a centrality measure in which each unit's status is a positive function of the statuses of those with which it is in contact” (Bonacich 1987, p. 1170).

Following Dimov et al. (2007), we examined the pattern of interactions of both primary contractors ($n = 318$) and subcontractors ($n = 949$) over the entire study period (resulting in a total $n = 1,267$ firms) rather than only including the interactions between the sampled firms; this allows us to produce an unbiased measure of status. Specifically, we calculated the eigenvector centrality (i.e., status) of all 1,267 state construction firms active during the period of 1995 to 2005 using directed ties between contractors and subcontractors in UCINET Version 6 (Borgatti et al. 2002).

Firm Performance Variable. Performance in construction industries is reflected by the accumulated outcomes on multiple discrete projects, in which administrative accounting instruments are typically used, and where project managers report to superiors in terms of cost and production quantity (Clegg and Courpasson 2004). That is, for construction firms, performance is directly related to the ability to earn profits across multiple projects (Bresnen et al. 2005). As a result, we utilized each firm's annual profit margin based on the bidding return (i.e., percentage of revenue in excess of cost) at the time the project was awarded to construct our firm performance measure. We computed each firm's awarded profit margin based on all awarded projects within a given year to capture *persistent* versus *episodic* bidding returns (Deltas and Engelbrecht-Wiggins 2005).

Control Variables. In addition to the controlling for effects that arise from panel data with our analytical method (see Analytical Method section below for further discussion), several control variables were also included in the analyses. First, we included control variables for geographic effects on firm-level outcomes. Competition in the highway construction industry is more concentrated in metropolitan areas than rural locations. Thus, we included in the analysis the number of contracts awarded to a firm in metropolitan locations with the expectation that firms in metropolitan areas would experience more competition than those in rural locations. Additionally, the state is organized into 13 Metropolitan Statistical Area (MSA) zones. To control for additional geographic effects on competition related to firms operating across multiple geographic regions, we included the *number of project locations* as the count of different MSA regions in which a firm completed a construction project in each year. These variables capturing the geographic locations of construction projects are intended to control for the market concentration and geographic variation in the levels of competition across the state (Johns and Zaichkowsky 2003, Moore et al. 2017).

Additional control variables included in the analyses were *firm age*, *project diversification*, and *firm size*; these are important because it is conceivable that firms with more resources tend to have more

status or find it easier to maintain status. We included *firm age* to control for firm-level experience effects. *Project diversification* was included to account for the diversity of projects the firm has taken on in any given year. Specifically, we counted the number of different project categories for each firm in each year; the state codes the various construction projects across 40 categories (e.g., interstate, metropolitan corridor, farm to market, local construction, interstate exchanges, bridge construction, routine maintenance, etc.). Finally, we controlled for *firm size* using the firm's annual revenue. Descriptive statistics and correlations for all variables are presented in Table 1.

Insert Table 1 about here

Analytical Method

We employed two-stage least squares (2SLS) and a hierarchical, time series approach to estimate the hypothesized relationships between ceremony participation, status, and firm performance. We hypothesized that increased participation in bidding ceremonies would be associated with increased status in competitor networks. Increased status in competitor networks, in turn, was hypothesized as negatively associated with firm financial performance. Consequently, status was modeled as a mediating variable between ceremony participation and firm performance. Since our statistical analysis is based on models containing systems of structurally-related equations, we utilized the 2SLS approach to control for biased error estimates that result from endogeneity by using the predicted values for status when estimating the relationship between status and firm performance (Henningsen and Hamann 2007, Shaver 2005).

In addition to utilizing 2SLS, we conducted a longitudinal test of mediation using panel data regression techniques that employ fixed and random effects; our approach here is similar to analyses of multilevel linear models (Goldstein 1987), random coefficient growth models (Bliese and Ployhart 2002, Ployhart et al. 2002), or hierarchical linear models (Bryk and Raudenbush 1992). Although these alternative approaches were viable, these methodologies typically model change in a dependent variable

or endogenous construct with invariant predictors (Pitariu and Ployhart 2009). As such, these methods were deemed unsuitable since the measures in our data vary across time. Moreover, our aim was not to focus on explaining change in an outcome variable over time but rather to control for correlated and non-constant variability in error terms to effectively model error covariances that occur from repeated measures taken on the same subjects (i.e., firms) over time (Beck and Katz 1995). Panel data regression techniques are designed to deal with violations of independent and homoscedastic error terms in the ordinary least squares model that arise from repeated measures across time and tend to bias standard error estimates (Krull and MacKinnon 2001).

The panel regression method we utilize expands the general linear model so that data containing repeated measures are permitted to exhibit correlated and non-constant variability in error terms, thereby providing the flexibility of modeling not only the means of the data but also their variances and covariances (West et al. 2007). This approach controls for the clustering of observations, due to repeated observations, by allowing complete separation of between- and within-subject variables (Alhorr et al. 2008, Moore et al. 2015). Specific to our data, the method controls for correlation that arises from repeated measures on the same firm (within-subject), as well as correlation that arises from observations in the same time period (between-subject), by including random effects for each. In addition to within-subject correlations, between-subject correlations from observations within the same time period are especially common in analyses of the construction industry due to temporally-oriented macro-economic factors. For example, state construction funds are budgeted on a yearly basis, thereby increasing or reducing the overall availability of projects. Panel data regression techniques account for such external influences.

Our statistical approach also provides two additional benefits that are specifically related to our study and provide controls for alternative explanations of empirical results. First, our theoretical focus was to model the antecedents and outcomes of status in competitive markets. Given the theoretical

similarities between status and reputation, we needed to control for reputational effects. In addition to controlling for reputation by holding quality constant from our sampling technique (as described above), we also utilized autoregressive error covariance structure control for the effect of firm performance across previous time periods on the standard errors in our models. We chose the first-order auto-regressive error covariance structure (AR(1)) covariance structure because it is designed to model error covariances as declining over time, such that more-recent time periods are expected to correlate more than less-recent time periods (Singer and Willett 2003). Furthermore, the first-order auto-regressive error structure was the most significant improvement of model fit in our analyses ($\Delta -2LL = 16.9$, $df = 1$, $p < 0.001$) when compared to other error covariance structures, including higher-order auto-regressive errors (i.e., AR(2) and AR(3)).

RESULTS

Our model of status in competitive bid letting contexts predicts that increased participation in ceremonies is related to subsequent increased levels of firm status. Increased status levels, then, result in lower levels of organizational performance. Table 2 contains the results of our analyses, in which the dependent variables were lagged by one-year. Since the average amount of time between bid awards and completion of a construction project is 170 days, we also tested the data using lags of three months, six months, and two years, but showed no changes in the pattern of results (i.e., no change in the signs or significances of the regression coefficients).

 Insert Table 2 about here

Model 1 in Table 2 includes only control variables as predictors of annual profit margin and finds firm age, number of project locations, and annual revenues to be significantly related to firm performance (i.e., profit margin). Model 2 adds substantive and symbolic ceremony participation predictors to Model 1. Model 2 suggests substantive ($\beta = 0.021$, $p < 0.05$) and symbolic ($\beta = 0.24$, $p < 0.05$) ceremony

participation are positive predictors of firm performance. This finding indicates that, *on the surface*, both proactive bidding and winning of projects are *seemingly* associated with better financial performance when status is not included in the model (see comparison of Model 2 and 4 results below). Model 3 examines Hypothesis 1 and 2 (H1 and H2), which argued that higher levels of substantive and symbolic ceremony participation, respectively, would be positively associated with status. In support of H1, we find that substantive ceremony participation—measured as the number of bids won in a year—is a positive predictor of status ($\beta = 0.291, p < 0.01$). In support of H2, symbolic ceremony participation—measured as the average rank across the projects a firm bid in a year—is a positive predictor of status ($\beta = 0.535, p < 0.001$). Therefore, we find support for the first two hypotheses (i.e., H1 and H2), which argued substantive and symbolic ceremony participation would be positively associated with subsequent status.

Hypothesis 3 (H3) argued that increased status in competitor networks would be negatively associated with firm performance. Using 2SLS procedure (e.g., Shaver 2005), we utilized the predicted values for status from Model 3 to predict profit margin. In support of H3, Model 4 indicates a negative relationship between status in competitor networks and subsequent firm performance while controlling for the independent effects of symbolic and substantive ceremony participation ($\beta = -0.850, p < 0.001$). When comparing Model 2 to Model 4, we find that the significant relationships between our two ceremony participation variables and profit margin (Model 2) become nonsignificant predictors of profit margin when the status mediator is included (Model 4), while significantly improving model fit (Δ in $-2LL = -12.48, p < 0.05$). Thus, our results suggest status fully mediates the relationship between ceremony participation and financial performance. This result is consistent with our key argument that a firm's repeated involvement in ceremonial biddings does create an impression of achieving social and economic performance, although its efforts to attain and maintain high status are accompanied by significant short-term financial costs. Specifically, the results of Model 4 suggest a one-unit increase in

status is associated with an approximate 0.85% reduced profit margin. Therefore, given that firms in our sample have an average annual revenue of \$88.82M (see Table 1), a drop of 0.85% in profit margin means that, on average, a company would lose \$750,000 per annum with each one-unit increase in status. Overall, our findings show that the costs of attaining and maintaining status are economically relevant and of practical significance.

Robustness and Post-hoc Analyses

In addition to the analyses presented above, additional robustness and post-hoc analyses were conducted. To check for robustness, we first tested our models using an alternative measure of profit margin as our dependent variable. While the initial set of results is constructed on annual profit margin of awarded bids, we also computed each firm's annual profit margin based on the *actual* payments received by a focal firm. The amount a firm is ultimately paid upon completion of a project generally differs from the amount awarded due to additional payments for change orders, as well costs charged by the state when a project is not completed within the time allotted. This robustness test resulted in the same pattern of signs and significances of the regression coefficients when compared to the results reported in Table 2. Specifically, substantive ($\beta = 0.076$, $p < 0.05$) and symbolic ($\beta = 0.421$, $p < 0.01$) ceremony participation were positive predictors of status, while status was a negative predictor of profit margin based on payments received by the firm ($\beta = -0.410$, $p < 0.01$). We also performed an additional robustness test using damages as a percent of the amount awarded to a contractor annually; this robustness test also confirmed our original findings. That is, we found the same patterns of relationships, but with the opposite signs (damages are inversely related to profit margins), for our regression coefficients.

To further explore the data, we also conducted two post hoc analyses.³ First, it seemed possible that symbolic ceremony participation may have a curvilinear relationship with status because the act of participating may seem only cursory if the bid were not actually competitive (i.e., has a reasonable chance of winning the bid). Therefore, we developed a rank order measure by averaging the bid rank for each

firm per year. The results of this post hoc analysis indicate a firm's average rank on auction bids (i.e., symbolic ceremony participation) has an inverted-U relationship with status. That is, there is a positive, direct ($\beta = -0.485$, $p < 0.01$) effect coupled with a negative curvilinear ($\beta = -0.269$, $p < 0.001$) effect of symbolic participation on status. As illustrated in Figure 1, there is a local maximum around the rank value of four, which indicates that, on average, there are status benefits for the top four ranked firms (the four lowest bids), but ranks beyond four show a negative relationship with status. Second, it seems logical to expect that the two forms of participation may interact in some way, either reinforcing or substituting for each other. Hence, we conducted a post-hoc analysis of the data examining the interaction effect of substantive and symbolic forms of participation. As shown in Figure 2, symbolic ceremony participation strengthens the relationship between substantive participation and status for firms winning few bids suggesting status may be best attained and maintained by using combinations of substantive and symbolic bidding behaviors over time.

 Insert Figures 1 and 2 about here

DISCUSSION

We began this manuscript by noting that, while there has been considerable research devoted to understanding how and why status is positively related to financial outcomes, the costs of gaining and maintaining of status have not been fully explored. Our study contributes to this discussion by offering a unique theoretical perspective of competitive markets and the strategic actions of firms by applying a social lens (e.g., Moore et al. 2012, Zajac and Westphal 2004, Levine et al. 2014, Obloj and Zenger 2017). Specifically, our conceptualization of competitive markets as a socially-constructed context—where ritualized market activities drive social stratification (Dacin et al. 2010) and status anxiety (Jensen 2006, Podolny 2001)—allows us to model the possibility that the pursuit of status may often result in suboptimal financial outcomes. Indeed, by eschewing the typically under-socialized conception of

competitive bidding and, instead, proposing a ceremonial view of bidding contests that highlights their social structure and interpretation, we hope to provide new insight into the social construction of markets and new evidence showing how the pursuit of social interests can sometimes conflict with the pursuit of economic interests.

Our research has unique implications for numerous areas of research in strategic management and organization theory, but seems particularly relevant to the competitive dynamics literature, which broadly seeks to understand and explain how organizations jockey for competitive position and realize outcomes vis-à-vis rivals (Chen 1996, Chen et al. 2007, Ketchen et al. 2004). We add to this literature by (1) analyzing the role of rituals, through ceremonies, in engendering status outcomes for firms operating in highly visible and competitive industries, and (2) examining whether rival firms compete more aggressively based on relative status positions, and if so, to what extent firm performance outcomes are negatively affected by such targeting. Following Bell's (1992) argument that social actors use ritualization strategically, our theoretical and empirical analyses demonstrate that firms compete within auctions and win because of the social pressures from external audiences and/or social benefits it affords them. Thus, what appears as economically unwise (i.e., a decline in performance) has certain social benefits that provide the necessary utility to cancel out economic disutility, particularly over time. Put another way, the utility function in competitive auctions may not be not limited to economic benefits, particularly when considered over longer time horizons. As such, future research might consider if and how firms with long-term orientations—the tendency to prioritize decisions and actions that have implications for the continuity, futurity, and perseverance of the firm (Brigham et al. 2014)—might approach competition, particularly bidding situations, differently than rivals. For as Chen and Miller (2015) recently highlighted, short-termism is generally associated with a rivalrous perspective that leans toward economically-incentivized tactics, while long-term orientation is aligned with a relational perspective.

Considering time further, it may seem logical to suggest that firms achieving high status through winning (suboptimal) bids, year on year, would eventually go bankrupt.⁴ However, status does appear to be “sticky” (Goffman 1951) such that status maintenance is not strictly limited to winning many bids year over year. Indeed, our empirical analyses suggest that being among the lowest bidders (but not actually winning the bid) also contributes to increased status, and firms are able to maintain status over time through different combinations of substantive and symbolic bidding behaviors. Our results also indicate that there are limits to what extent firms can rely on ceremonial participation, and our post hoc test of a U-shaped impact of symbolic participation shows that the inflection point occurs at the rank of 4. Of course, this result is specific to the context being studied. However, the very fact that this inflection occurs is theoretically very important as it explains why firms are pushed to rely on winning bids in their quest for status. We would therefore welcome extensions of our research (e.g., with longer time series and/or different industry contexts) to illuminate whether the two bidding strategies are substitutes or complements, and, more generally, to further unpack the linkages between business strategy, status and long-term survival of the firm.

Insights from our study also have implications for competitive market activities apart from bidding contexts. For example, our perspective highlights that competition for merger and acquisition targets also contains ceremonial artifacts, as reported in the business press. From our theoretical perspective, we would expect the impact of this reporting to be associated with pricing decisions of acquirers and help explain over-pricing of acquisition targets. It may also help us better understand the bandwagon patterns that are often associated with waves of acquisitions or other imitative adaptations such as market entry (Zachary et al. 2015). While a general bandwagon argument suggests that imitation is done quite arbitrarily (Abrahamson & Rosenkopf, 1993), scholars have argued that an increased number of adoptions of change may create “a growing fear of lost legitimacy or competitive standing for a focal organization” (Kraatz, 1998, pg. 625), which then results in further imitation based on this anxiety.

It seems reasonable to suggest (and to empirically examine in future research) that with increased visibility levels of these strategic activities—such as in markets with strong networks that utilize rituals and ceremonies extensively—that the speed, sequence, magnitude, and outcomes of bandwagon imitation would be influenced.

Our study can also shed light on what economics and finance researchers describe as a “winner’s curse”—a situation in competitive market environments when a winning bid exceeds the real value of a market offering. The breadth of competitive bidding contexts in which the winner’s curse has been documented is impressive, including labor markets (e.g., Perri 1995), mergers/acquisitions (e.g., Giliberto and Varaiya 1989), outsourcing (Jiang et al. 2010, Kern et al. 2002), corporate takeovers (e.g., Boone and Mullherin 2008, Varaiya and Ferris 1987) and capital market activities (e.g., Levis 1990, Beatty and Ritter 1989, Rock 1986). Generally, our research suggests that the winner’s curse phenomenon may be better understood from a moderately-socialized perspective (Granovetter, 1985) that recognizes competitive bidding markets as a context that includes elements of ritualized, social ceremony, in which organizations pursue both social and economic interests (Swedburg, 2005).

Specific to our study, we note that although the state government now uses electronic means for the submission of competitive bids, it still reports the economic outcomes through highly ritualized ceremonies. Perhaps the state realizes the value of the ceremonial process and the likelihood of gaining lower bids because of the social pressures to win. If the bid letting process were based entirely upon efficiency concerns related to how to meet the technical task requirements of bid lettings, then the bidding ceremonies would be fully replaced with electronic reporting of bids and outcomes. Instead, ritualized, social processes are enhanced by requiring bidders to attend bid lettings, which leads to socially constructed, legitimized, understandings shared among market actors. In fact, in follow-up interviews with market participants, we found no evidence that actors questioned the rationality of requiring them to convene together at the state’s capital on a monthly basis to participate in the process. The state’s process

of bid lettings was simply taken-for-granted by market actors and accepted as the legitimate way in which the process should be administered.

In terms of limitations and further possible extensions of our work, we first acknowledge that our empirical focus was on a single industry and on the level of visibility in bidding ceremonies; future research could consider other industry settings and/or ceremony contexts. While our context allows us to closely examine competitors, we would welcome research that extends our approach to consider other stakeholders (e.g., between customers and competitors within full industry networks). We also chose a market context where competition is based primarily on price (i.e., lowest bid logic of state-funded projects). While this logic is commonly the basis of competitive and market exchanges, a logical extension is to consider alternative markets where reputation-based differences (i.e., in perceived quality) are operant simultaneously with price. For instance, Payne (2006) examined the medical group industry (i.e., physician clinics), which is characterized by the competing factors of providing quality health care and maintaining efficiencies due to the third-party (i.e., insurance-based) payment system, to examine configurations in a suboptimal equifinality context. Further, future research might explore these and related phenomena using data on privately-funded projects instead of, or in addition to, the data from government-funded projects.

In summary, our study shows the benefit of developing and testing a more socialized perspective of the environment in which competitive market activities occur. Specifically, by highlighting how institutionalized beliefs and activities are socially constructed through field-configuring events (e.g., business ceremonies) and social categorization processes (i.e., status hierarchies), we show how and why social factors can influence the economic decisions of market actors. In so doing, we have provided a new socially-informed basis for understanding firm behavior that otherwise would be considered economically suboptimal.

REFERENCES

- Abrahamson E, Rosenkopf L. (1993). Institutional and competitive bandwagons: Using mathematical modeling as a tool to explain innovation diffusion. *Academy of Management Review*, 18: 487-5
- Alhorr HS, Moore C, Payne GT. (2008) The impact of economic integration on cross-border venture capital investments: Evidence from the European Union. *Entrepreneurship: Theory & Practice*, 32(5): 897-917.
- Anand N, Watson MR. (2004). Tournament rituals in the evolution of fields: The case of the Grammy Awards. *Academy of Management Journal* 47(1):59-80.
- Beatty RP, Ritter JR. (1986). Investment banking, reputation, and the underpricing of initial public offerings. *Journal of Financial Economics* 15(1):213-232.
- Beck N, Katz JN. (1995). What to do (and not to do) with time-series cross-section data. *American Political Science Review* 89(3):634-647.
- Beckman CM, Haunschild PR, Phillips DJ. (2004). Friends or strangers? Firm-specific uncertainty, market uncertainty, and network partner selection. *Organization Science* 15(3):259-275.
- Bell C. (1992). *Ritual theory, ritual practice*. Cary, NC, USA: Oxford University Press, USA.
- Benjamin, B. A., Podolny, J. M. 1999. Status, quality, and social order in the California wine industry. *Administrative Science Quarterly* 44(3): 563—589.
- Berger J, Ridgeway CL, Fisek MH, Norman RZ. (1998). The legitimation and delegitimation of power and prestige orders. *American Sociological Review* 63: 379–405.
- Berger PT, Luckmann T. (1967). *The social construction of reality*. New York: Doubleday.
- Bitektine A. (2011). Toward a theory of social judgments of organizations: The case of legitimacy, reputation, and status. *Academy of Management Review* 36(1):151-179.
- Bliese PD, Ployhart RE. (2002). Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods* 5 (4):362-387.
- Bonacich P. (1987). Power and centrality: A family of measures. *American Journal of Sociology* 92(5):1170-1182.
- Bonacich P, Lloyd P. (2001). Eigenvector-like measures of centrality for asymmetric relations. *Social Networks* 23(3):191-201.
- Boone AL, Mullherin JH. (2008). Do auctions induce a winner's curse? New evidence from the corporate takeover market. *Journal of Financial Economics* 89(1):1-19.
- Borgatti S, Everett M, Freeman LC. 2002. *UCInet for Windows: Software for social network analysis*. Cambridge, MA: Analytic Technologies.
- Borgatti SP. (2005). Centrality and network flow. *Social Networks* 27(1):55-71.
- Bresnen M, Goussevskaia A, Swan J. (2005). Organizational routines, situated learning and processes of change in project-based organizations. *Project Management Journal* 36(3):27-41.
- Brigham KH, Lumpkin GT, Payne GT, Zachary MA. (2014). Researching long-term orientation: Construct validation and recommendations for future research. *Family Business Review* 27 (1): 72-88.
- Bryk A, Raudenbush S. W. (1992). *Hierarchical Linear Models for Social and Behavioral Research: Applications and Data Analysis Methods*. Newbury Park, CA: Sage.
- Burris V. (2004). The academic caste system: Prestige hierarchies in PhD exchange networks. *American Sociological Review* 69: 239–264.
- Chen M-J. (1996). Competitor analysis and interfirm rivalry: Toward a theoretical integration. *Academy of Management Review*, 21 (1): 100-134.
- Chen M-J, Su K-H, Tsai W. (2007). Competitive tension: The awareness-motivation-capability perspective. *Academy of Management Journal* 50 (1):101-118.
- Chung S, Singh H, Lee K. (2000). Complementarity, status similarity and social capital as drivers of alliance formation. *Strategic Management Journal* 21 (1):1-22.

- Clegg S, Courpasson D. (2004). Political hybrids: Tocquevillean views on project organizations. *Journal of Management Studies* 41(4):525-547.
- Clemens ES, Cook JM. (1999). Politics and institutionalism: Explaining durability and change. *Annual Review of Sociology*, 25: 441–466.
- Coleman JS. (1990). *Foundations of social theory*. Cambridge, MA: Belnap Press.
- Dacin MT, Dacin PA. 2008. Traditions as institutionalized practice: Implications for deinstitutionalization. Greenwood, C. Oliver, K. Sahlin, R. Suddaby, eds. *SAGE Handbook of Organizational Institutionalism*. Thousand Oaks, CA, Sage, 327–351.
- Dacin MT, Munir K, Tracey P. 2010. Formal dining at Cambridge colleges: linking ritual performance and institutional maintenance. *Academy of Management Journal* 53(6) 1393–1418.
- Dandridge TC. (1986). Ceremony as an integration of work and play. *Organization Studies* 7(2):159-170.
- de Gregori TR. (1977). Technology and ceremonial behavior: Aspects of institutionalism. *Journal of Economic Issues (Association for Evolutionary Economics)* 11(4):861-870.
- Deltas G, Engelbrecht-Wiggans R. (2005). Naive bidding. *Management Science* 51(3):328-338.
- DiMaggio PJ, Powell WW. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48(2):147-160.
- Dimov D, Shepherd DA, Sutcliffe KM. (2007). Requisite expertise, firm reputation, and status in venture capital investment allocation decisions. *Journal of Business Venturing* 22(4):481-502.
- Durkheim E. [1915] 1968. *The elementary forms of the religious life*. London: G. Allen & Unwin.
- Dutton JE, Dukerich JM, Harquail CV. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39: 239–263.
- Dyer D, Kagel JH, Levin D. (1989). A comparison of naive and experienced bidders in common value offer auctions: A laboratory analysis. *Economic Journal* 99 (394):108-115.
- Eccles R. (1981). The quasi firm in the construction industry. *Journal of Economic Behavior & Organization* 2(4):335-357.
- Engelbrecht-Wiggins R, Milgrom P, Weber R. (1983). Competitive bidding and proprietary information. *Journal of Mathematical Economics*, 11:161-169.
- Fiske ST, Taylor SE. (1991). *Social cognition*, 2nd. New York: McGraw-Hill.
- Fombrun CJ. (1996). *Reputation: Realizing value from the corporate image*. Boston, Mass: Harvard Business School Press.
- Fombrun CJ, Shanley M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal* 33(2):233-258.
- Friedkin NE. (1991). Theoretical foundations for centrality measures. *American Journal of Sociology* 96(6):1478-1504.
- Giliberto SM, Varaiya NP. (1989). The winner's curse and bidder competition in acquisitions: Evidence from failed bank auctions. *Journal of Finance* 44(1):59-75.
- Giorgi S, Weber K. 2015. Marks of distinction: framing and audience appreciation in the context of investment advice. *Administrative Science Quarterly* 60(2) 333–367.
- Goffman E. (1951). Symbols of Class Status. *British Journal of Sociology* 2(4) 294–304.
- Goffman E. (1959). *The presentation of self in everyday life*. Garden City, NY, Anchor.
- Goffman E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Goldstein H. (1987). *Multilevel models in educational and social research*. New York; London: C. Griffin.
- Gould RV. (2002). The origins of status hierarchies: A formal theory and empirical test. *American Journal of Sociology* 107(5):1143-1178.
- Henningsen A, Hamann JD. (2007). Systemfit: A package for estimating systems of simultaneous equations in R. *Journal of Statistical Software* 23(4): 1-40.
- Hubbell CH. (1965). An input-output approach to clique identification. *Sociometry* 28 (4):377-399.

- Jensen M. (2003). The role of network resources in market Entry: Commercial Banks' Entry into Investment Banking, 1991--1997." *Administrative Science Quarterly* 48 (3):466-497.
- Jensen M. (2006). Should we stay or should we go? Accountability, status anxiety, and client defections. *Administrative Science Quarterly* 51(1):97-128.
- Jensen M. (2008). The use of relational discrimination to manage market entry: When do social status and structural holes work against you? *Academy of Management Journal* 51(4):723-743.
- Johns CL, Zaichkowsky JL. (2003). Bidding behavior at the auction. *Psychology & Marketing* 20(4):303-322.
- Kahneman D. (2011). *Thinking, fast and slow*. New York: Farrar, Strauss, Giroux
- Katz L. (1953). A new index derived from sociometric data. *Psychometrika* 18 (1):39-43.
- Kern T, Willcocks LP, van Heck E. (2002). The winner's curse in IT outsourcing: Strategies for avoiding relational trauma. *California Management Review* 44(2):47-69.
- Ketchen DJ, Snow CC, Hoover VL. (2004). Research on competitive dynamics: Recent accomplishments and future challenges. *Journal of Management* 30(6):779-804.
- Kim, J-YJ, Halebian JJ, Finkelstein S. (2011). When firms are desperate to grow via acquisition: The effect of growth patterns and acquisition experience on acquisition premiums. *Administrative Science Quarterly*, 56: 26–60.
- Kossinets G. (2006). Effects of missing data in social networks. *Social Networks* 28 (3):247-268.
- Kraatz MS. (1998). Learning by association? Interorganizational networks and adaptation to environmental change. *Academy of Management Journal*, 41(6): 621-643.
- Krull JL, MacKinnon DP. (2001). Multilevel modeling of individual and group level mediated effects. *Multivariate Behavioral Research* 36(2):249-277.
- Lampel J, Meyer AD. (2008). Guest editors' introduction. *Journal of Management Studies* 45(6):1025-1035.
- Lin N. (1999). Social networks and status attainment. *Annual Review of Sociology*, 25: 467–488.
- Lin Z, Yang H, Arya B. 2009. Alliance partners and firm performance: Resource complementarity and status association. *Strategic Management Journal* 30(9):921-940.
- Lind B, Plott CR. (1991). The winner's curse: Experiments with buyers and with sellers. *American Economic Review* 81(1):335-346.
- Lok J, de Rond M. (2013). On the plasticity of institutions: Containing and restoring practice breakdowns at the Cambridge University Boat Club. *Academy of Management Journal*. 56(1):185–207.
- Meyer AD, Gaba V, Colwell KA. (2005). Organizing far from equilibrium: Nonlinear change in organizational fields. *Organization Science* 16(5):456-473.
- Meyer JW, Rowan B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology* 83(2):340-363.
- Moore CB, Bell RG, Filatotchev I, Rasheed A. (2012) Foreign IPO capital market choice: Understanding the institutional fit of corporate governance. *Strategic Management Journal* 33(8): 914-937.
- Moore CB, Payne GT, Bell RG, Davis JL. (2015). Institutional distance and cross-border venture capital investment flows. *Journal of Small Business Management*, 53(2), 482-500.
- Moore CB, Payne GT, Autry CW, Griffis SE. (2017). Project complexity and bonding social capital in network organizations. *Group and Organization Management*. DOI: 10.1177/1059601116650556.
- Oliver AL, Montgomery K. (2008). Using field-configuring events for sense-making: A cognitive network approach. *Journal of Management Studies* 45(6):1147-1167.
- Payne GT. (2006). Examining configurations and firm performance in a suboptimal equifinality context. *Organization Science*, 17(6): 756-770.
- Peterson MF, Lewin AY. (1998). Embedded organizational events: The units of process in organization science. *Organization Science* 9(1):16-33.
- Pitariu AH, Ployhart RE. (2010). Explaining change: Theorizing and testing dynamic mediated longitudinal relationships. *Journal of Management* 36(2):405-429.
- Ployhart, RE, Holtz, BC, Bliese PD. (2002). Longitudinal data analysis: Applications of random coefficient modeling to leadership research. *The Leadership Quarterly* 13:455-586. Podolny JM.

- (1993). A status-based model of market competition. *American Journal of Sociology* 98(4):829-872.
- Podolny JM. (1994). Market uncertainty and the social character of economic exchange. *Administrative Science Quarterly* 39(3):458-483.
- Podolny JM. (2001). Networks as the pipes and prisms of the market. *American Journal of Sociology* 107(1):33-60.
- Powell WW, DiMaggio P. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Rao H. (1994). The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American automobile industry: 1895--1912. *Strategic Management Journal* 15: 29-44.
- Rao H. (1998). Caveat emptor: The construction of nonprofit consumer watchdog organizations. *American Journal of Sociology*, 103: 912-961.
- Ridgeway CL. (1991). The social construction of status value: Gender and other nominal characteristics. *Social Forces* 70(2):367-386.
- Ridgeway CL, Boyle EH, Kuipers KJ, Robinson DT. (1998). How do status beliefs develop? The role of resources and interactional experiences. *American Sociological Review* 63(3):331-350.
- Rock K. (1986). Why new issues are underpriced. *Journal of Financial Economics* 15(1):187-212.
- Roll R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business* 59(2):197-216.
- Scott WR. (1995). *Institutions and organizations*. Thousand Oaks: Sage Publications.
- Selznick, P. 1949. *TVA and the Grass Roots: A Study in the Sociology of Formal Organizations*. Berkeley and Los Angeles: University of California Press.
- Selznick, P. 1957. *Leadership in Administration*. New York: Harper and Row.
- Shaver JM. (2005). Testing for mediating variables in management research: Concerns, implications and alternative strategies. *Journal of Management* 31(3):330-353.
- Singer JD, Willett JB. (2003). *Applied longitudinal data analysis: Modeling change and even occurrence*. New York: Oxford University Press
- Siclen SV. (2010). Competition in bidding markets. *OECD Journal of Competition Law & Policy*, 10(1): 78-125
- Stuart TE, Hoang H, Hybels RC. 1999. Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly* 44 (2):315-349.
- Swedberg R. (1994). Markets as social structures. Pp. 225-282 in *The Handbook of Economic Sociology*, edited by Smelser NJ, Swedberg R. Princeton, New Jersey: Princeton University Press.
- Taylor M. (1969). Influence structures. *Sociometry* 32 (4):490-502.
- Thiel SE. (1988). Some evidence on the winner's curse. *American Economic Review* 78(5):884-895.
- Trice HM, Belasco J, Alutto JA. (1969). The role of ceremonials in organizational behavior. *Industrial & Labor Relations Review* 23(1):40-51.
- Trice HM, Beyer JM. (1984). Studying organizational cultures through rites and ceremonials. *Academy of Management Review* 9(4):653-669.
- Washington M, Zajac EJ. 2005. Status evolution and competition: Theory and evidence. *Academy of Management Journal* 48(2):282-296.
- Wasserman, S., Faust, K., 1994. *Social Network Analysis: Methods and Applications*. Cambridge University Press, Cambridge.
- Weber M. [1922] 1978. *Economy and society: An outline of interpretive sociology*. Berkeley: University of California Press.
- Weber K, Dacin MT. (2011) The cultural construction of organizational life: Introduction to the special issue. *Organization Science* 22(2):287-209.
- West BT, Welch KB, Galecki AT. *Linear mixed models: A practical guide using statistical software*. New York: Chapman & Hall/CRC
- White HC. (1981a). Production markets as induced role structures. *Sociological Methodology* 12(1): 1-57.

- White HC. (1981b). Where do markets come from? *American Journal of Sociology* 87(3):517-547.
- Zachary MA, Gianiodis P, Payne GT, Markman G. (2015). Entry timing: Enduring lessons and future directions. *Journal of Management*, 41(5): 1388-1415.
- Zajac EJ, Bazerman MH. (1991). Blind spots in industry and competitor analysis: Implications of interfirm (mis)perceptions for strategic decisions. *Academy of Management Review* 16(1):37-56.
- Zajac EJ, Westphal JD. (2004). The social construction of market value: Institutionalization and learning perspectives on stock market reactions. *American Sociological Review* 69(3):433-457.

ENDNOTES

1. This theoretical perspective does not suggest that by gaining status firms can achieve *only* social gains. For instance, in our context of road construction, being considered a high-status player may result in longer-term sustainability, survival, and even financial returns because of the high involvement of partners, subcontractors, and market intermediaries (e.g., guarantors and insurers). However, at the point of bidding, future collaborations and associated gains are highly uncertain and hard to estimate. Instead, in a ceremonial context, gaining a high status becomes an immediate objective of the firm's bidding strategy.
2. Given that that substantial (H1) and symbolic (H2) organizational actions may serve as substitutes or complements (Westphal and Zajac, 1994), we also empirically examine their potential joint effect on status, as well as potential curvilinear relationships, in a series of robustness checks and post-hoc analyses.
3. We are grateful to two anonymous reviewers for their suggestions regarding post hoc analyses.
4. We are grateful to an anonymous reviewer for raising this issue.

Table 1. Descriptive Statistics and Correlations

Variable	Mean	St. Dev.	1	2	3	4	5	6	7	8
1 Metro Locations	6.40	12.67								
2 Firm Age	16.96	13.28	0.169 ***							
3 Project Diversification	15.69	16.97	0.391 ***	0.067 **						
4 Number of Project Locations	2.83	1.12	0.274 ***	-0.018	0.560 ***					
5 Annual Revenue	\$88.82M	\$245.98M	0.232 ***	0.128 ***	0.183 ***	0.096 ***				
6 Substantive Ceremony Participation	22.61	20.67	0.506 ***	0.097 ***	0.182 ***	0.569 ***	0.168			
7 Symbolic Ceremony Participation	2.82	1.05	-0.063 ***	-0.012	0.268 ***	0.072 ***	0.060	-0.035 *		
8 Status	4.94	7.62	0.126 ***	0.119 ***	0.252 ***	0.178 ***	0.492 ***	0.225 ***	0.082 ***	
9 Awarded Profit Margin	-7.30%	21.03%	0.069 **	0.073 ***	0.060 ***	0.004	0.048	0.030	0.069 ***	-0.003

* p < 0.05

** p < 0.01

*** p < 0.001

n = 3,167 firm-years

Table 2. Panel Regression and 2SLS Modeling Estimates

DV =	Model 1 Profit Margin	Model 2 Profit Margin	Model 3 Status	Model 4 (2SLS) Profit Margin
<i>Control Variables</i>				
Metro Locations	0.005	-0.01	-0.009	0.012
Firm Age	-0.007 ***	0.002 *	0.047 **	0.002 *
Project Diversification	0.001	0.003 ***	0.008	0.002 ***
Number of Project Locations	-0.018 ***	-0.014 **	0.358	-0.003
Annual Revenue	0.010 ***	0.011 ***	0.027 ***	0.024 ***
<i>Hypothesized Variables</i>				
Substantive Ceremony Participation		0.021 *	0.291 **	0.019
Symbolic Ceremony Participation		0.024 *	0.535 ***	0.014
Status				-0.850 ***
-2 Log Likelihood	429.53 ***	425.19 ***	-4355.88 ***	412.71 ***
Wald Chi-squared	474.94 ***	478.26 ***	167.32 ***	459.28 ***
Change in -2LL		-4.34 *		-12.48 *

* p < 0.05

**p < 0.01

***p < 0.001

Model 1 = Profit Margin = f(controls)

Model 2 = Profit Margin = f(controls, Symbolic Ceremonial Participation, Substantive Ceremonial Participation)

Model 3 = Status = f(controls, Symbolic Ceremonial Participation, Substantive Ceremonial Participation)

Model 4 = Using predicted values for Status from Model 3, Profit Margin = f(controls, Symbolic + Substantive Ceremonial Participation, Status)

Figure 1. Inverted-U Relationship between Symbolic Ceremony Participation and Status

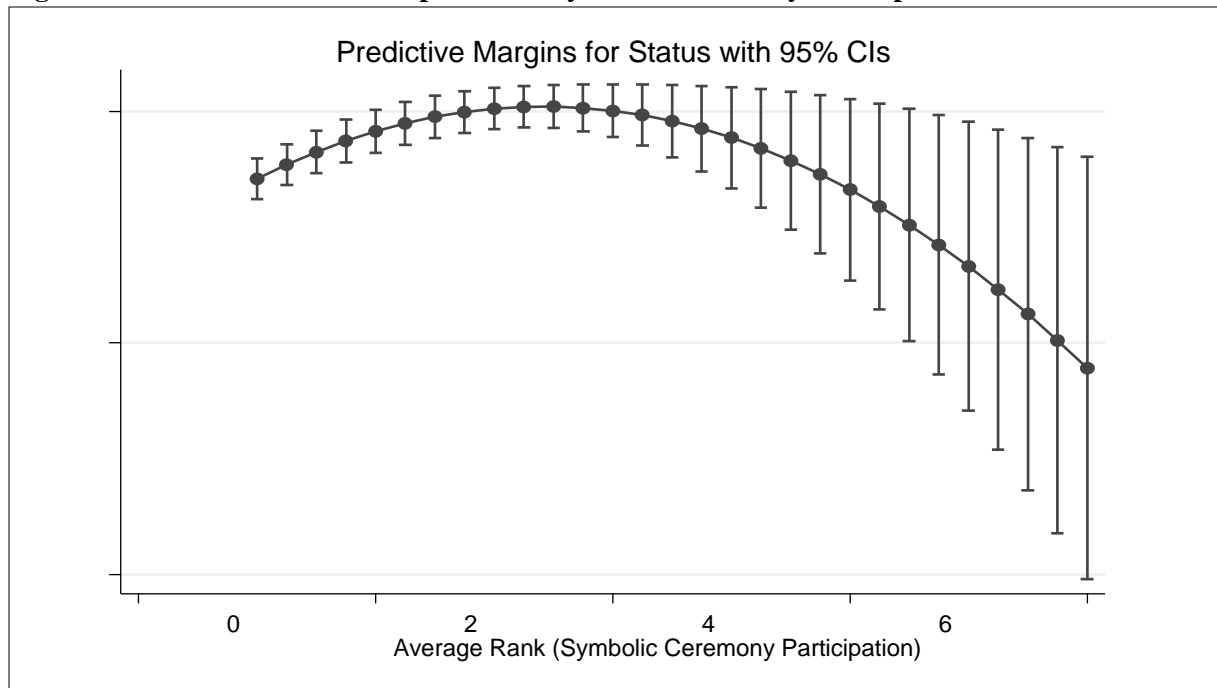


Figure 2. Interaction Effect of Substantive and Symbolic Ceremony Participation on Status

